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10/607,040	06/27/2003	Yuji Yoshida	1076.1088	6406

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EXAMINER	
NGUYEN, MINH CHAU	

ART UNIT	PAPER NUMBER
2145	

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09/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

MJ

Office Action Summary	Application No.	Applicant(s)	
	10/607,040	YOSHIDA, YUJI	
	Examiner	Art Unit	
	MINH-CHAU NGUYEN	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-13,17 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-13,17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

MN

DETAILED ACTION

This action is responsive to the amendment of the applicant filed on 07/27/07.

Claims 1,2,5-13,17 and 18 are presented for further examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-2,5,7-13,17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (Wang) (US 6,826,613 B1), and Bentley et al. (Bentley) (5,537,404), and further in view of Carlson et al. (Carlson) (US 6,845,503 B1).

2. Claim 1, Wang teaches a switch relay device for connecting at least one new device to a network including at least one host, the switch relay device comprising:

   a switch (120) connected to the network (Col. 5, L. 5-17, L. 50-65; and figure 1A);

   a switch (120) connected to each new device (i.e. device 130) (Col. 5, L. 5-17, L. 50-65; and figure 1A); and

the at least one of new devices (i.e. device 130) is connected or disconnected or when at least one of the new devices (i.e. device 135) is switched (figure 1B);

a memory device for reading device information from the new device and storing the device information (i.e. the switch 120/320 appears as a virtual storage device which must includes a memory. The switch reads a handoff message/information which includes the identification of the second device 135/335 (i.e. address) from the first device 130/330 and stores this information into a table in the memory) (Col. 4, L. 39-65; and Col. 7, L. 10-Col. 8, L. 8; and figure 3).

sending the device information (i.e. the handoff information) to the new device (i.e. device 335), which is prestored in the memory (i.e. the switch 320 sends the handoff information of the first device 330 to the second device 335) (Col. 7, L. 10-Col. 8, L. 8; and figure 3).

Wang fails to teach a first physical layer circuit of the switch connected to the network; a second physical layer circuit of the switch connected to the device; and a link layer circuit, which is connected between the first physical layer circuit and the second physical layer circuit, to separate the first physical layer circuit and the second physical layer circuit from each other, wherein the link layer circuit does not reconfigure the network when the at least one of new devices is connected or disconnected or when at least one of the new devices is switched; and an application layer circuit for sending the information and for controlling

data transfer between the first physical layer circuit and the second physical layer circuit via the link layer circuit; and sending the device information to the host so that the host can recognize the device for transmitting data based on the device information. However, Bentley and Carlson, in the same field of endeavor having closely related objectivity, Bentley teaches a first physical layer circuit of the switch connected to the network (figure 1; and Col. 1, L. 56-67; and Col. 2, L. 5-42; and Col. 4, L. 52-Col. 5, L. 2); a second physical layer circuit of the switch connected to the device (figure 1; and Col. 1, L. 56-67; and Col. 2, L. 5-42; and Col. 4, L. 52-Col. 5, L. 2); and a link layer circuit, which is connected between the first physical layer circuit and the second physical layer circuit, to separate the first physical layer circuit and the second physical layer circuit from each other, wherein the link layer circuit does not reconfigure the network when the at least one of new devices is connected or disconnected or when at least one of the new devices is switched (figure 1; and Col. 1, L. 56-67; and Col. 2, L. 5-42; and Col. 4, L. 52-Col. 5, L. 2; L. 55-Col. 6, L. 40); and an application layer circuit for sending the information and for controlling data transfer between the first physical layer circuit and the second physical layer circuit via the link layer circuit (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 5, L. 25-Col. 6, L. 25); and Carlson teaches sending the device information (i.e. response time, or offline, or online, or busy of an application server 108A-B) to the host (i.e. client) so that the host can recognize the device for transmitting data based on the device information (i.e. the web server 104 sends the current state information of the

application server in the cluster to the client, so that the client can maintain this information and can recognize which device for transmitting data based on this status information) (figure 2B, 4-5, and 15 step 486; and Col. 17, L. 19-39; and Col. 7, L. 49-65; and Col. 10, L. 19-Col. 11, L. 13).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Bentley's teachings of a first physical layer circuit of the switch connected to the network; a second physical layer circuit of the switch connected to the device; and a link layer circuit, which is connected between the first physical layer circuit and the second physical layer circuit, to separate the first physical layer circuit and the second physical layer circuit from each other, wherein the link layer circuit does not reconfigure the network when the at least one of new devices is connected or disconnected or when at least one of the new devices is switched; and an application layer circuit for sending the information and for controlling data transfer between the first physical layer circuit and the second physical layer circuit via the link layer circuit, with Carlson's teaching of sending the device information to the host so that the host can recognize the device for transmitting data based on the device information, in the teachings of Wang in virtually addressing storage devices through a switch, for the purpose of providing an improved method of data communications and a method of reducing connection costs between terminals of a telecommunication system where the data transmission is intermittent.

3. Claim 2, Wang, Bentley and Carlson disclose the invention substantially as claimed. Wang teaches a switch (120) for switching the at least one of the new devices (130,135) (Col. 5, L. 5-17, L. 50-65; and figure 1A). Besides this, Bentley teaches the link layer circuit transfers data between the first physical layer circuit and one of the second physical layer circuits that is connected the new device based on the switching operation of the network (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 5, L. 55-Col. 6, L. 40).

4. Claim 5, Wang, Bentley and Carlson disclose the invention substantially as claimed. Bentley teaches the application layer circuit includes a generation unit for generating general purpose device information based on the device information (figure 1-2; and Col. 1, L. 55-Col. 2, L. 52; and Col. 5, L. 25-Col. 6, L. 25).

5. Claim 7, Wang, Bentley and Carlson disclose the invention substantially as claimed. Carlson teaches sending one of the device information selected by the host to the host based on the prestored device information (i.e. the web server 104 sends the current state information of the application server in the cluster selected by the client to the client based on the prestored device status information in the table of the web server) (figure 2B, 4-5, and 15 step 486; and Col. 17, L. 19-39; and Col. 7, L. 49-65; and Col. 10, L. 19-Col. 11, L. 13). Besides this, Bentley teaches an application layer circuit includes a sending unit for

sending the information selected by the host to the host (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 5, L. 25-Col. 6, L. 25).

6. Claim 8, Wang, Bentley and Carlson disclose the invention substantially as claimed. Wang teaches a delaying unit for determining whether data is being transferred in the network when one of the new devices is switched by the switch and for delaying the occurrence of a bus reset when the data is being transferred until the data transfer process ends (Col. 10, L. 15-25; and Col. 11, L. 50-41; and Col. 15, L. 35-Col. 16, L. 30). Besides this, Bentley teaches an application layer circuit (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 5, L. 25-Col. 6, L. 25).

7. Claim 9, Wang teaches a switch relay system for connecting at least one new device to a network including at least one host, the switch relay system comprising:

a switch (120) connected to the network (Col. 5, L. 5-17, L. 50-65; and figure 1A);

a switch (120) connected to each new device (i.e. device 130) (Col. 5, L. 5-17, L. 50-65; and figure 1A); and

a switch (120) for switching at least one of the new devices by selectively connecting and disconnecting to the at least one new device (i.e. device 130,135) (Col. 5, L. 5-17, L. 50-65; and Col. 7, L. 10-Col. 8, L. 8; and figure 1A); and

a control unit for detecting whether the at least one new device is connected or whether at least one of the new devices is switched by the switch, and for not reconfiguring the network when connection or switching is detected (Col. 1, L. 15-23; and Col. 5, L. 5-17, L. 50-65).

a memory device for reading device information from the new device and storing the device information (i.e. the switch 120/320 appears as a virtual storage device which must includes a memory. The switch reads a handoff message/information which includes the identification of the second device 135/335 (i.e. address) from the first device 130/330 and stores this information into a table in the memory) (Col. 4, L. 39-65; and Col. 7, L. 10-Col. 8, L. 8; and figure 3).

sending the device information (i.e. the handoff information) to the new device (i.e. device 335), which is prestored in the memory (i.e. the switch 320 sends the handoff information of the first device 330 to the second device 335) (Col. 7, L. 10-Col. 8, L. 8; and figure 3).

Wang fails to teach a first physical layer circuit of the switch connected to the network; a second physical layer circuit of the switch connected to the device; and a link layer circuit, which is connected between the first physical layer circuit and the second physical layer circuit, to separate the first physical layer circuit and the second physical layer circuit from each other, wherein the link layer circuit does not reconfigure the network when the at least one of a new device is connected or disconnected or when at least one of the new devices is switched;

and an application layer circuit for sending the information and for controlling data transfer between the first physical layer circuit and the second physical layer circuit based on the detection result of the control unit; and sending the device information to the host so that the host can recognize the device for transmitting data based on the device information. However, Bentley and Carlson, in the same field of endeavor having closely related objectivity, Bentley teaches a first physical layer circuit of the switch connected to the network (figure 1; and Col. 1, L. 56-67; and Col. 2, L. 5-42; and Col. 4, L. 52-Col. 5, L. 2); a second physical layer circuit of the switch connected to the device (figure 1; and Col. 1, L. 56-67; and Col. 2, L. 5-42; and Col. 4, L. 52-Col. 5, L. 2); and a link layer circuit, which is connected between the first physical layer circuit and the second physical layer circuit, to separate the first physical layer circuit and the second physical layer circuit from each other, wherein the link layer circuit does not reconfigure the network when the at least one of a new device is connected or disconnected or when at least one of the new devices is switched (figure 1; and Col. 1, L. 56-67; and Col. 2, L. 5-42; and Col. 4, L. 52-Col. 5, L. 2; L. 55-Col. 6, L. 40); and an application layer circuit for sending the information selected by the switch to the host and for controlling data transfer between the first physical layer circuit and the second physical layer circuit based on the detection result of the control unit (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 5, L. 25-Col. 6, L. 25); and Carlson teaches sending the device information (i.e. response time, or offline, or online, or busy of an application server 108A-B) to the host so that the host (i.e.

client) can recognize the device for transmitting data based on the device information (i.e. the web server 104 sends the current state information of the application server in the cluster to the client, so that the client can maintain this information and can recognize which device for transmitting data based on this status information) (figure 2B, 4-5, and 15 step 486; and Col. 17, L. 19-39; and Col. 7, L. 49-65; and Col. 10, L. 19-Col. 11, L. 13).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Bentley's teachings of a first physical layer circuit of the switch connected to the network; a second physical layer circuit of the switch connected to the device; and a link layer circuit, which is connected between the first physical layer circuit and the second physical layer circuit, to separate the first physical layer circuit and the second physical layer circuit from each other, wherein the link layer circuit does not reconfigure the network when the at least one of a new device is connected or disconnected or when at least one of the new devices is switched; and an application layer circuit for sending the information and for controlling data transfer between the first physical layer circuit and the second physical layer circuit based on the detection result of the control unit, with Carlson's teaching of sending the device information to the host so that the host can recognize the device for transmitting data based on the device information, in the teachings of Wang in virtually addressing storage devices through a switch, for the purpose of providing an improved method of data communications and a method of reducing connection

costs between terminals of a telecommunication system where the data transmission is intermittent.

8. Claim 10, Wang, Bentley and Carlson disclose the invention substantially as claimed. Wang teaches when the connection or switching of the new device is detected, the control unit causes a bus reset to occur only in the new device in which the connection or switching is detected (Col. 11, L. 50-Col. 12, L. 60).

9. Claim 11, Wang, Bentley and Carlson disclose the invention substantially as claimed. Wang teaches the control unit reads device information of the new device, detects whether one of the new devices is selected by the switch, (i.e. the switch 320 reads the handoff message and the identification of the second device 335 from the first device 330, and detects whether the second device is selected for take over the original role of the first device) (Col. 4, L. 20-65; and Col. 7, L. 10-Col. 8, L. 8; and Col. 11, L. 50-Col. 12, L. 60; and figure 3). Besides this, Carlson teaches sending the device information of the selected new device to the host of the network when one of the new devices is selected, and sends the device information of all of the new devices when none of the new devices is selected (i.e. the web server 104 sends the current state information and the identification of the other application server in the cluster to the client, so that the client can maintain this information and can recognize which device for transmitting data based on this information. The web server also sends the

current state information of each application server in the cluster to the client when none of the servers is selected if all of servers in the cluster are busy/overload) (figure 2B, 4-5, and 15 step 486; and Col. 17, L. 19-39; and Col. 7, L. 49-65; and Col. 10, L. 19-Col. 11, L. 13).

10. Claim 12, Wang teaches a switch relay device for connecting a plurality of devices to a network including a host, the switch rely device comprising:

a switch (120) which selectively connects and disconnects to a plurality of devices (130-135) (Col. 5, L. 5-17, L. 50-65; and figure 1A).

a memory device for reading device information from the new device and storing the device information (i.e. the switch 120/320 appears as a virtual storage device which must includes a memory. The switch reads a handoff message/information which includes the identification of the second device 135/335 (i.e. address) from the first device 130/330 and stores this information into a table in the memory) (Col. 4, L. 39-65; and Col. 7, L. 10-Col. 8, L. 8; and figure 3).

sending device information (i.e. the handoff information) to a device (i.e. device 335) from the memory through the network in accordance with the device connected by the switch, wherein the switch provides data, which is transferred from the client, to the devices (i.e. device 335) in accordance with requests from the client (i.e. the switch 320 sends the handoff information of the first device 330 to the second device 335) (Col. 7, L. 10-Col. 8, L. 8; and figure 3).

Wang fails to teach a plurality of device physical layer circuits, each device physical layer circuit being for connection to a device; a network physical layer circuit for connection to the network; a link layer circuit connected between the network physical layer circuit and the device physical layer circuits; and the network physical layer circuit functions as a single node with respect to the network, even though the plurality of devices are connected or disconnected to the device physical layer circuits; and an application layer circuit which sends the information through the network physical layer circuit to a device physical layer circuit; wherein the application layer circuit selectively provides data to the devices through the physical layer circuits and link layer circuit; and sending the device information to the host so that the host can recognize the device for transmitting data based on the device information. However, Bentley and Carlson, in the same field of endeavor having closely related objectivity, Bentley teaches a plurality of device physical layer circuits, each device physical layer circuit being for connection to a device (figure 1); a network physical layer circuit for connection to the network (figure 1; and Col. 2, L. 5-26); a link layer circuit connected between the network physical layer circuit and the device physical layer circuits (figure 1; and Col. 2, L. 5-35; and Col. 6, L. 15-25); and the network physical layer circuit functions as a single node with respect to the network, even though the plurality of devices are connected or disconnected to the device physical layer circuits (figure 1; and Col. 2, L. 5-26; and Col. 4, L. 35-Col. 5, L. 2); and an application layer circuit which sends the information through the network

physical layer circuit to a device physical layer circuit (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 5, L. 25-Col. 6, L. 25); wherein the application layer circuit selectively provides data to the devices through the physical layer circuits and link layer circuit (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 4, L. 35-Col. 5, L. 2, L. 25-Col. 6, L. 40); and Carlson teaches sending the device information (i.e. response time, or offline, or online, or busy of an application server 108A-B) to the host (i.e. client) so that the host can recognize the device for transmitting data based on the device information (i.e. the web server 104 sends the current state information of the application server in the cluster to the client, so that the client can maintain this information and can recognize which device for transmitting data based on this status information) (figure 2B, 4-5, and 15 step 486; and Col. 17, L. 19-39; and Col. 7, L. 49-65; and Col. 10, L. 19-Col. 11, L. 13).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Bentley's teachings of a plurality of device physical layer circuits, each device physical layer circuit being for connection to a device; a network physical layer circuit for connection to the network; a link layer circuit connected between the network physical layer circuit and the device physical layer circuits; and the network physical layer circuit functions as a single node with respect to the network, even though the plurality of devices are connected or disconnected to the device physical layer circuits; and an application layer circuit which sends the information through the network

physical layer circuit to a device physical layer circuit; wherein the application layer circuit selectively provides data to the devices through the physical layer circuits and link layer circuit, with Carlson's teaching of sending the device information to the host so that the host can recognize the device for transmitting data based on the device information, in the teachings of Wang in virtually addressing storage devices through a switch, for the purpose of providing an improved method of data communications and a method of reducing connection costs between terminals of a telecommunication system where the data transmission is intermittent.

11. Claim 13, Wang, Bentley and Carlson disclose the invention substantially as claimed. Wang teaches a device (130) is connected in accordance with the selection of the switch (120) (Col. 5, L. 5-17, L. 50-65; and figure 1A). Besides this, Bentley teaches the link layer circuit transfers data between the network physical layer circuit (figure 1; and Col. 1, L. 55-Col. 2, L. 52), and one of the device physical layer circuits to which a device is connected in accordance with the selection of the switch (i.e. the local ISDN switch) (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 5, L. 25-Col. 6, L. 25).

12. Claim 17, Wang, Bentley and Carlson disclose the invention substantially as claimed. Wang teaches when the switch selectively connects and disconnects to the plurality of devices, data is transferred between a device and the switch until

the data transfer has completed (Col. 5, L. 5-17, L. 50-65; and Col. 6, L. 12-Col. 8, L. 8; and figure 1A). Besides this, Bentley teaches the device physical layer circuits and the connection between the device and the network (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 4, L. 35-Col. 5, L. 2, L. 55-Col. 6, L. 25).

13. Claim 18, Wang, Bentley and Carlson disclose the invention substantially as claimed. Wang teaches the device is connected in accordance with the selection of the switch (figure 1; and Col. 5, L. 50-65). Besides this, Bentley teaches the link layer circuit transfers data between the network physical layer circuit, and one of the device physical layer circuits to which a device is connected in the network (figure 1; and Col. 1, L. 55-Col. 2, L. 52; and Col. 4, L. 35-Col. 5, L. 2, L. 55-Col. 6, L. 25).

14. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang and Bentley and Carlson as applied to claim 1 above, and further in view of Minakuchi et al. (Minakuchi) (US 2001/0002365 A1).

15. Claim 6, Wang, Bentley and Carlson are relied upon for the disclosure set forth in the previous rejection. Wang teaches transferring and saving units for determining a first device selected by the switch to store data received from the host (client) and for transferring the data stored in the first device to a second device while the handoff occurred in the first new device (figure 3; and Col. 3, L.

31-Col. 5, L. 17, L. 50-Col. 8, L. 8). In addition, Bentley teaches the application layer circuit (figure 1; and Col. 2, L. 5-35; and Col. 5, L. 25-54).

Wang, Bentley and Carlson fail to teach determining whether there is available memory space in the first device. However, Minakuchi, in the same field of endeavor having closely related objectivity, teaches determining whether there is available memory space in the first device (paragraph 169).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Minakuchi's teachings of determining whether there is available memory space in the first device, with Carlson's teaching of system and method for enabling atomic class loading in an application server environment, with Bentley's teaching of switched circuit connection management over public data network for wide are networks, in the teachings of Wang in virtually addressing storage devices through a switch, for the purpose of providing an improved method of data communications and a method of reducing connection costs between terminals of a telecommunication system where the data transmission is intermittent.

Response to Arguments

Applicant's arguments filed 07/27/07 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claims 1,2,5-13,17 and 18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU N. NGUYEN whose telephone number is (571)272-4242. The examiner can normally be reached on Monday-Friday from 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JASON D. CARDONE can be reached on (571) 272-3933. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Minh-Chau Nguyen
Art Unit: 2145

JASON CARDONE
SUPERVISORY PATENT EXAMINER